WHAT IS CLAIMED IS:

1. A method for improving head position accuracy in a disk drive during track following of concentric data storage tracks on a rotating disk's storage surface through real-time identification of external vibration, the method comprising the steps of:

seeking to a predetermined data storage track;

following the predetermined data storage track using a servo control loop having a nominal gain and being responsive to a position error signal (PES) generated during track following;

waiting a vibration detection delay period after the seek to the predetermined data storage track;

after the vibration detection delay period, counting occurrences of the PES exceeding a write unsafe (WUS) limit to generate a WUS limit exception count, and determining a property of a variance of a predetermined number of temporally accumulated spectral power values, within a predetermined frequency band, generated from the PES during track following; and

increasing the gain of the servo control loop, within the predetermined frequency band, from the nominal gain to a vibration gain, if the WUS limit exception count exceeds a first threshold and if the property of the variance exceeds a second threshold, to attenuate the effect of external vibration on the position of the head during track following.

2. A method for improving head position accuracy as defined in claim 1, wherein the gain of the servo control loop is increased to the vibration gain for a predetermined vibration time period, after which the gain of the servo control loop is returned to the nominal gain.

3. A method for improving head position accuracy as defined in claim 2, wherein the vibration time period is between about 1 to 5 seconds.

4. A method for improving head position accuracy as defined in claim 3, wherein the vibration time period is about 2 seconds.

5. A method for improving head position accuracy as defined in claim 1, wherein the gain of the servo control loop remains at the vibration gain during a read operation performed after a write operation.

6. A method for improving head position accuracy as defined in claim 1, wherein the gain of the servo control loop remains at the vibration gain after a subsequent seek operation.

7. A method for improving head position accuracy as defined in claim 1, wherein the vibration detection delay period is between about one-half (1/2) and three-fourths (3/4) of one disk rotation.

8. A method for improving head position accuracy as defined in claim 1, wherein the vibration detection delay period is about two-thirds (2/3) of one disk rotation.

9. A method for improving head position accuracy as defined in claim 1, wherein a WUS limit exception occurs when the PES indicates that a read/write head deviates from a desired track position for the predetermined data storage track by more than a predetermined WUS limit during track following.

10. A method for improving head position accuracy as defined in claim 1, wherein the property of the variance of the accumulated spectral power values is based on an excursion of the variance of the accumulated spectral power values from a baseline variance value determined with no external vibration present.

11. A method for improving head position accuracy as defined in claim 1, wherein the first threshold comprises at least 20 WUS limit exceptions within about 120 position samples based on embedded servo sectors defining the predetermined data storage track.

12. A method for improving head position accuracy as defined in claim 1, wherein the predetermined frequency is between about 0 and 500 hertz.

13. A disk drive having improved head position accuracy during track following of concentric data storage tracks on a rotating disk's storage surface through real-time identification of external vibration, comprising:

means for seeking to a predetermined data storage track;

means for following the predetermined data storage track using a servo control loop having a nominal gain and being responsive to a position error signal (PES) generated during track following;

means for waiting a vibration detection delay period after the seek to the predetermined data storage track;

means for counting occurrences of the PES exceeding a write unsafe (WUS) limit to generate a WUS limit exception count, and for determining a property of a variance of a predetermined number of temporally accumulated spectral power values, within a predetermined frequency band, generated from the PES during track following, after the vibration detection delay period; and

means for increasing the gain of the servo control loop, within the predetermined frequency band, from the nominal gain to a vibration gain, if the WUS limit exception count exceeds a first threshold and if the property of the variance exceeds a second threshold, to attenuate the effect of external vibration on the position of the head during track following.

14. A disk drive having improved head position accuracy as defined in claim 13, wherein the means for increasing the gain of the servo control loop increases the servo control loop's gain to the vibration gain for a predetermined vibration time period, after which the gain of the servo control loop is returned to the nominal gain.

15. A disk drive having improved head position accuracy as defined in claim 14, wherein the vibration time period is between about 1 to 5 seconds.

16. A disk drive having improved head position accuracy as defined in claim 15, wherein the vibration time period is about 2 seconds.

17. A disk drive having improved head position accuracy as defined in claim 13, wherein means for increasing the gain of the servo control loop maintains the servo control loop's gain at the vibration gain during a read operation performed after a write operation.

18. A disk drive having improved head position accuracy as defined in claim 13, wherein means for increasing the gain of the servo control loop maintains the servo control loop's gain at the vibration gain after a subsequent seek operation.

19. A disk drive having improved head position accuracy as defined in claim 13, wherein the vibration detection delay period is between about one-half (1/2) and three-fourths (3/4) of one disk rotation.

20. A disk drive having improved head position accuracy as defined in claim 13, wherein the vibration detection delay period is about two-thirds (2/3) of one disk rotation.

21. A disk drive having improved head position accuracy as defined in claim 13, wherein a WUS limit exception occurs when the PES indicates that a read/write head deviates from a desired track position for the predetermined data storage track by more than a predetermined WUS limit during track following.

22. A disk drive having improved head position accuracy as defined in claim 13, wherein the property of the variance of the accumulated spectral power values is based on an excursion of the variance of the accumulated spectral power values from a baseline variance value determined with no external vibration present.

23. A disk drive having improved head position accuracy as defined in claim 13, wherein the first threshold comprises at least 20 WUS limit exceptions within about 120 position samples based on embedded servo sectors defining the predetermined data storage track.

24. A disk drive having improved head position accuracy as defined in claim 13, wherein the predetermined frequency is between about 0 and 500 hertz.